# Preparation

## Student Group

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## Table of Contents

# Preparation

## Do math right

- calculate fractions in fractions correct: \begin{align*} {{{A}\over{B}}\over{C}} \quad &\neq \quad {{A}\over{{B}\over{C}}} \\ {{{A}\over{B}}\over{C}} = {{A}\over{{B}\cdot{C}}} \quad &\neq \quad {{A}\over{{B}\over{C}}} = {{A\cdot C}\over{B}} \end{align*}
- Rearrange fractions correct: based on $\beta = {{I_C}\over{I_B}}$ on **cannot** derive $I_B = {{\beta}\over{I_C}}$..

## Do physics right

- Check the units. e.g. $dB$ cannot be converted in $V$
- Prove you (mis)conceptions on impedances
  - Check whether $Z$ or $\underline{Z}$ is needed in formulas: $Z=|\underline{Z}|\neq \underline{Z}$
  - impedances are not (only) resistors, at least do not think of $R$ is given as $\underline{Z}$.
    For purely ohmic components the other way around is correct: $\underline{Z}=R$.
  - However, impedances 'act' like ohmic resistors in formulars.
    E.g. for the series circuit: $R_{eq}=R_1+R_2+R_3+... \rightarrow \underline{Z}_{eq}=\underline{Z}_1+\underline{Z}_2+\underline{Z}_3+... $

## Do exam right

- Do not miss out questions. Sometimes there is more than one answer required